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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,497	07/25/2003	Andrew Capon	70078-0179	1496

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EXAMINER

PATEL, MITAL B

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,497

Applicant(s)

CAPON ET AL.

Examiner

Mital B. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-13 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/31/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "134" has been used to designate both annular surface and upper tip. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "418" has been used to designate both annular ring and annular pivot. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 12 is objected to because of the following informalities: It appears that the term --and-- or the term --or-- is missing between the terms "primary" and "supplementary". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

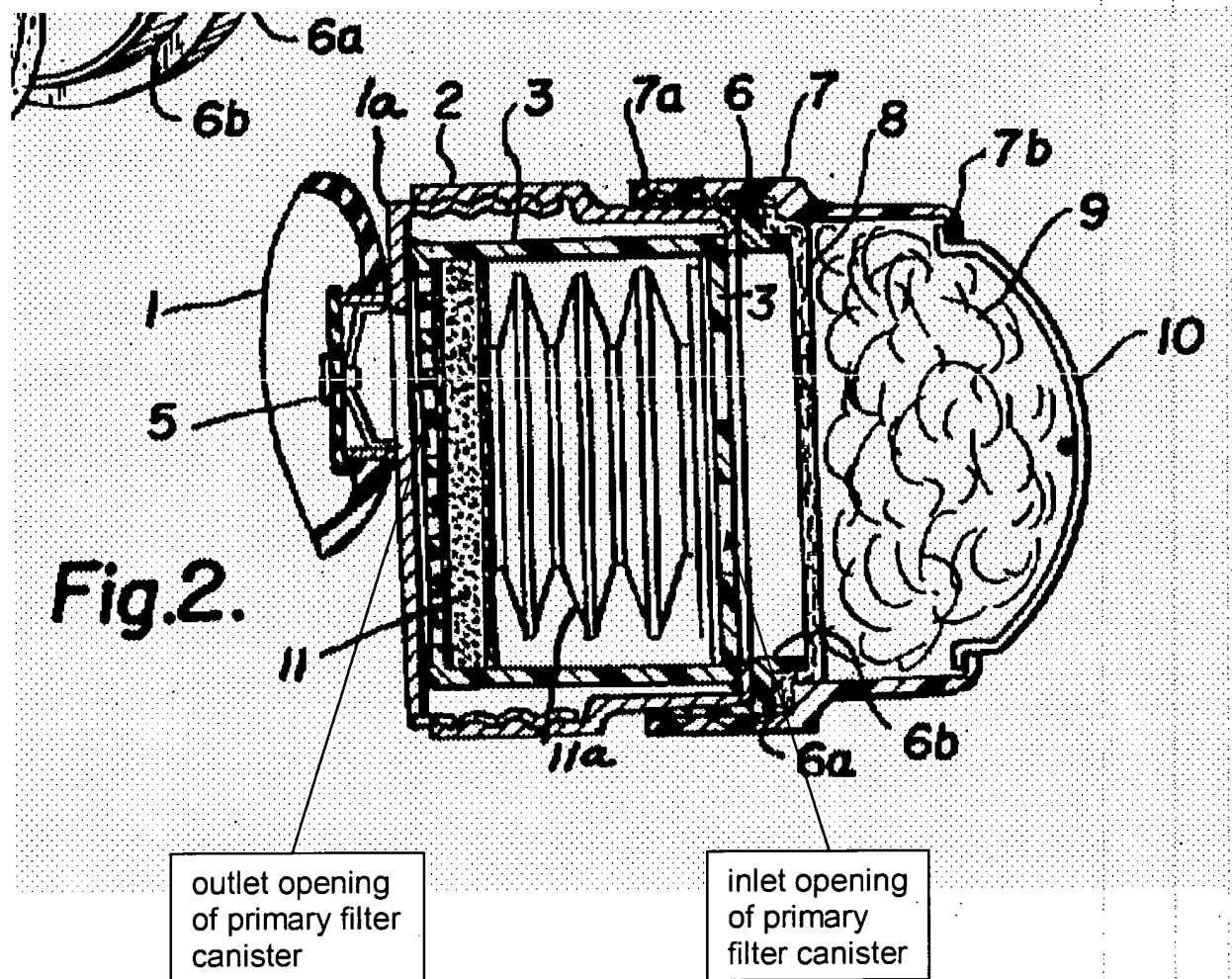
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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 7, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Klusewitz et al (US 3,142,549).

6. **As to claim 1**, Klusewitz et al teach a filter canister assembly (**See Fig. 2**) for a gas mask **1** comprising: a primary filter canister **2,3** with an inlet opening at a first end (**See Fig. 2 attachment below**) and an outlet at a second end (**See Fig. 2 attachment below**); a first filter medium **11a** adapted to remove aerosols, particulate materials and droplets from air and mounted in the primary filter canister in communication with the primary filter canister inlet opening; a second filter medium **11** adapted to remove toxic gases and arranged in serial communication with the first filter medium in the primary filter canister and with the outlet opening in the first filter housing, whereby the first filter and second filter media are capable of filtering out contaminants in normal hostile environments; and a supplementary filter canister **7** having an inlet opening (**that formed at 7b**) at a first end **7b** and an outlet opening (**that formed at 7a**) at a second end **7a**, the supplementary filter canister second end is removably (**See Figs. 1-2**) mounted to the primary filter canister first end so that the primary filter canister inlet opening is in communication with the supplementary filter canister outlet opening; and a third filter media **8,9** adapted to filter toxic industrial materials and mounted in said supplementary filter canister in communication with the inlet and outlet openings in the second filter canister.



7. As to claim 7, Klusewitz et al teach a filter canister assembly wherein the third filter medium is a particulate filter and a sorbent filter (See Col. 2, lines 54-60 and Col. 3, lines 45-51, which disclose filter 9 to be made of cotton or paper which can serve as particulate filter and a sorbent filter).

8. As to claim 9, Klusewitz et al teach a filter canister assembly wherein the second filter medium 11 comprises an adsorbent carbon filter medium (See Col. 3, lines 11-12).

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9. **As to claim 11**, Klusewitz et al teach a filter canister assembly wherein the composition and amount of the third filter medium **8,9** is adapted to boost the capability of the first and second filter media to filter TIMs from contaminated air (**See Col 3, lines 18-25 and Col. 3, lines 37-44 which disclose that filter medium 8,9 absorb the majority of the material to be filtered, therefore implying that the capability of the first and second filter media to filter out material is increased or boosted**).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klusewitz et al (US 3,142,549) in view of Sundstrom (US 5,158,077).

14. **As to claim 8**, Klusewitz et al teach essentially all of the limitations except for wherein the first filter medium comprises a pleated paper. Klusewitz et al disclose that the first filter medium 11a is a bellows filter or may be any other suitable filter unit. However, the use of a particular type of filter depends on the intended use, i.e., what type of material is desired to be filtered out. Sundstrom teaches a filter medium that comprises a pleated paper for filtering particles. Since Klusewitz et al disclose that any other suitable filter unit may be used in lieu of that taught by Klusewitz et al, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the bellows filter of Klusewitz et al with the pleated paper filter of Sundstrom so that specifically particles may be filtered out. Furthermore, it would have been obvious to one of ordinary skill in the art that the use of a pleated paper filter would also allow for better air ventilation between the various filter media.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klusewitz et al (US 3,142,549) in view of Newton (US 5,660,173).

16. **As to claim 10**, Klusewitz et al teach essentially all of the limitations except for wherein the second filter medium further includes metallic salts that interact with

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contaminant gases. Newton does teach the use of metallic salts in order to broaden the scope of chemical filtration by including both physical adsorption and chemical interaction with the impregnants to remove those chemicals that are poorly adsorbed and retained by physical adsorption alone. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include metallic salts in the second filter medium of Klusewitz et al as taught by Newton in order to increase the adsorption characteristic of the filter media so that those chemicals which are poorly adsorbed maybe easily adsorbed without the salts may readily be adsorbed with the addition of the metallic salts.

17. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klusewitz et al (US 3,142,549)

18. **As to claims 12 and 13**, Klusewitz et al teach essentially all of the limitations except for wherein at least one of the primary and supplementary filter canisters has an elliptical shape or wherein both of the primary and supplementary filter canisters have an elliptical shape. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to make the canisters of Klusewitz et al of an elliptical shape because Applicant has not disclosed that canisters being elliptical in shape provides an advantage, is used for a particular purpose, solves a stated problem, or provides an unexpected result. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the canisters of Klusewitz et al because the function of the canister to house

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the filter media is not altered by the shape of the canister. Therefore, it would have been an obvious matter of design choice to modify Klusewitz et al to obtain the invention as specified in claims 12 and 13 above.

Allowable Subject Matter

19. Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter: As to claim 2, the prior art of record does not teach nor render obvious the overall claimed combination of a filter canister assembly wherein the first and second filter media further comprise a barrier between them to force air entering the canister through the inlet opening from a central portion of the first medium in a radial direction through the first filter medium to an outer portion thereof, then axially to an outer portion of the second filter medium, then radially through the second filter medium to a central portion of the second filter medium to the outlet opening of the housing.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6467481, US 6340024, US 6146449, US 5996580, US 5797974, US 5776213, US 5766287, US 5651810, US 5595910, US 5240479, US

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5038775, US 4867770, US 4714486, US 4548626, US 4088461, US 2744524, US 2744523, US 2227959, and US 923776.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mital B. Patel whose telephone number is 703-306-5444. The examiner can normally be reached on Monday-Friday (8:00 - 4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 703-308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mital B. Patel
Examiner
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4/18/04